What we claim is:

1. A method for identifying an interacting set of molecules comprising:

A) generating fragments of a reporter molecule which have a directly or indirectly detectable activity when associated;

B) coupling first fragments to members of a first panel of molecules;

C) coupling second fragments to members of a second panel of molecules;

D) mixing the products of B) and C);

E) directly or indirectly testing for said activity; and

F) identifying the panel members whose interaction resulted in said activity and which thus form an interacting set.

2. A method for identifying an interacting set of molecules comprising:

A) identifying a first and a second panel of molecules whose mutual interaction is desired to be tested;

B) coupling molecules of said first panel to first fragments of a reporter molecule;

C) coupling molecules of said second panel to second fragments of said reporter molecule;

D) mixing the products of B) and C);

E) directly or indirectly testing for said activity; and

F) identifying the panel members whose interaction resulted in said activity and which thus form an interacting set.

3. A method of Claim 1 where at least one of said panels comprises a library of molecules.

4. A method of Claim 1 where at least two of said panels comprise a library of molecules.

5. A method of Claim 2 where at least one of said panels comprises a library of molecules.

6. A method of Claim 2 where at least two of said panels comprise a library of molecules.

7. A method of screening multiple panels of molecules against each other to determine the ability of individual panel members to form an interacting set comprising:

A) coupling first and second fragments of a reporter molecule to different panel members;

B) mixing the products of A);

C) testing for reporter molecule activity; and

D) identifying the panel members whose interaction results in said activity and which thus form an interacting set.

8. A method comprising directly or indirectly introducing different interacting sets into separate cell populations and identifying an interacting set that provides its host cells with a growth advantage relative to cells containing a different interacting set.

9. A method according to any of Claims 1-8 wherein fragments are used that have decreased avidity for each other relative to a reference set of fragments and the interacting sets that have the highest reporter molecule activities are identified.

10. A method of preparing an assay system comprising:

A) identifying a first and a second panel of molecules whose mutual interaction is desired to be tested;

B) coupling molecules of said first panel to first fragments of a reporter molecule; and

C) coupling molecules of said second panel to second fragments of said reporter molecule.

11. An assay system comprising a first panel of molecules coupled to first fragments of a reporter molecule and a second panel of molecules coupled to the second fragment of said reporter molecule.

12. A composition comprising at least one compound produced according to step B) of Claim 10 and at least one compound produced according to step C) of Claim 10.

13. A composition comprising one or more interacting sets of molecules as identified by a method of any of Claims 1-8.

14. A composition comprising one or more interacting sets of molecules as identified by a method of Claim 9.

15. Cells containing an interacting set of molecules as identified by a method of any of Claims 1-8.

16. Cells containing an interacting set of molecules as identified by a method of Claim 9.

17. A method comprising directly or indirectly introducing different interacting sets into separate cell populations and identifying an interacting set that provides its host cells with a greater response relative to cells containing a different interacting set.